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Revision to Final Report

SOLID WASTE MANAGEMENT PLAN

san mateo county, california

may 1977

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SOLID WASTE MANAGEMENT PLAN
FOR
SAN MATEO COUNTY, CALIFORNIA

REVISION TO FINAL REPORT
MAY, 1977

Prepared by the
Department of Public Works
in collaboration with the
Solid Waste Advisory Committee



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MEMBERSHIP

SOLID WASTE ADVISORY COMMITTEE

SAN MATEO COUNTY

<u>CITY OR AGENCY</u>	<u>REPRESENTATIVE</u>	<u>POSITION</u>
Atherton	D. Kallstrom	Private Citizen
Belmont	A. Nepomuceno	Assistant Sanitary Engineer
Brisbane	P. F. Goercke	Mayor
Burlingame	V. A. Mangini	Councilman
Colma	P. C' de Baca	Private Citizen
Daly City	M. R. Stewart	Councilman
Foster City	J. McGrew	Councilman
Half Moon Bay	J. Marmont	Mayor
Hillsborough	R. Davidson	City Manager
Menlo Park	R. Stephens	Mayor
Millbrae	L. Kennedy	Acting Public Works Director
Pacifica	J. Fulford	Councilperson
Portola Valley	K. Mitchell	Councilman
Redwood City	R. Bury	Councilman
San Bruno	J. Cadigan	Private Citizen
San Carlos	G. Cook	City Engineer
San Mateo	J. Chalmers	Mayor
	A. Bergeron (Alternate)	Superintendent of Maintenance
South San Francisco	F. Addiego	Director of Public Services
Woodside	O. Mayer	Councilperson
East Palo Alto	G. Wilks	Chairperson of the Council
Municipal Council		League of Women Voters
General Public	L. Craig	President, Browning-Ferris Industries of San Mateo County
Scavenger Industry	L. J. Devincenzi	District Board Chairman
South County Garbage & Refuse Disposal District	J. J. Zucca	
County of San Mateo	D. Nichols	County Manager
County of San Mateo	S. H. Cantwell, Jr.	Public Works Director
County of San Mateo	D. A. Woolfe	Planning Director
County of San Mateo	H. F. Eich	Public Health Engineer
	P. Duffy (Alternate)	Vector Control Specialist

NON-VOTING MEMBERS

County of San Mateo	R. Greene	Deputy District Attorney
County of San Mateo	R. R. Eppler	Senior Civil Engineer

PREFACE

Contained herein are revisions to the "Solid Waste Management Plan for San Mateo County, Final Report". This document, together with the above-mentioned Final Report, will constitute the San Mateo County Solid Waste Management Plan when adopted by the San Mateo County Board of Supervisors and the State Solid Waste Management Board.

The revisions are intended to meet the requirements of the State Solid Waste Management Board which on November 5, 1976, approved the Plan except for the implementation schedule and the date of initiation for the "Northwest Regional Transfer Station".

The revisions contained herein include several pages in Chapter IV and Chapter X in its entirety. Addenda previously submitted to the State Solid Waste Management Board are included in the Enclosures. In addition, there is an Errata page for a few other corrections that are appropriate to indicate at this time. Simple updates or minor technical corrections due to the passage of time or the occurrence of events not related to the issues at hand are not included herein, as they would needlessly complicate this summary document. Obviously, such changes can and should be made when the Plan is reviewed for consideration of amendments and reprinting.

Some of the assumptions and projections in the original Chapter IV were rendered obsolete by the decision to close the Mussel Rock Disposal Site in 1977. This decision has an impact on the lifetime of the Ox Mountain Sanitary Landfill. Therefore, the lifetime of Ox Mountain was recalculated to reflect the input from Collection Service Areas A and C (Daly City and Pacifica) and to acknowledge other influences such as the actual opening of the Ox Mountain facility and the closure of the Half Moon Bay Dump at the end of December, 1976.

Chapter X required substantial revision to incorporate the implementation schedule and the opening in the very near future of the northwest regional transfer station. Rewriting the entire chapter facilitates incorporation of the Contingency Plan which was submitted to the State Board in August of 1976, and the designation of an enforcement agency pursuant to A.B. 2439. The latter action, while not specifically mentioned by the State Solid Waste Management Board in its approval resolution, is required by law to be taken soon and is, in fact, essential to the implementation plan.

The changes indicated by this summary were concurred in by the San Mateo County Solid Waste Advisory Committee and reviewed by State Board staff. Approval is now being sought from the nineteen cities of San Mateo County pursuant to Section 17152, California Administrative Code. When a majority of the cities containing a majority of the incorporated-area population have given their approval, the Plan as revised will be presented to the County Board of Supervisors for approval and forwarding to the State Solid Waste Management Board.

My office is available to answer any questions regarding the contents of the report.



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COUNTY GOVERNMENT CENTER
REDWOOD CITY, CA 94063
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REVISIONS TO TEXT

No Class I landfill facility is now located within the county, necessitating the exportation of Group 1 waste products.

Scavenger companies servicing South San Francisco and San Bruno have established transfer facilities and conduct some recycling operations at their stations. Other scavenger companies separate certain recyclable materials at their collection corporation yards. The San Mateo County Scavenger Company has acquired a location for a large transfer and processing station in Redwood City. ~~However, recently there has arisen some question as to its authorization from the city for operations.~~ However, the City Council of Redwood City, on November 8, 1976, upheld the City Planning Commission's denial of a use permit for the transfer-processing station.

A public rubbish collection point for local public use was established in Belmont, by the city when the local rubbish landfill was closed in 1970. This action allowed continuance (on a reduced basis) of general public disposal in the area after closure of the local landfill which had been operated by the South County Garbage and Refuse Disposal District.

Several very small recycling stations available to the public have been established by various private individuals, civic groups, industries or scavenger companies. Information pertaining to those activities as known at this time is contained in Table IV-4,5. Except for those supported by industry such as Coors Beer and Kaiser Aluminum, most of the others require some subsidy in the form of contributed labor, facilities or equipment to remain in operation. Although they do provide a small recycling capability, none are of sufficient size to materially reduce area-wide disposal needs. See Table IV-6 for tonnages processed in recycling operations.

Late in 1976, a recycling operation for Group III wastes was begun in Brisbane by the Solid Waste Recycling Corporation. The facility is located on Beatty Road, across the city line from the San Francisco transfer station, and is designed to process non-water soluble, non-decomposable waste such as earth, rock, brick, metal, concrete paving fragments, structural concrete, asphalt paving, clay products, glass and inert slag tailings. The non-saleable portion of the material will be used as engineered fill on nearby low-lying property, in a manner consistent with normal land grading requirements.

Landfill disposal facilities are rapidly being depleted in the area. Since 1963 disposal operations conducted at eight landfills located in Pacifica, Brisbane (2 sites), South San Francisco, Redwood City, Belmont, La Honda and Half Moon Bay have been terminated. Since six of these were used for disposal of scavenger-collected wastes under city franchises, their closures resulted in significant hardship to the scavenger

industry.

The terminations would have resulted in hardships to the cities involved. However, these were avoided primarily through planning efforts and accommodations made by the individual scavenger companies, the county and the two remaining cities of the county that permit landfill disposal for all municipal wastes and that have jurisdictional authority (and now ownership) over the Mussel Rock (Daly City) and Marsh Road (Menlo Park) facilities.

Most cities are now relying upon the ~~development and opening of~~ the Ox Mountain facility for medium term planning solutions. ~~It is apparent that unless the Corinda les Tranees portion of Ox Mountain facility is promptly developed and opened by the private owner, a serious crisis affecting several collection service areas, fifteen (15) cities and three (3) scavenger companies, will soon become unavoidable.~~ Of the nine (9) landfills remaining in the county-wide area, only three are available for scavenger use. The two at Marsh Road will last only a few years (3-5 years) but while the site at Mussel Rock has a long-term capability has been ordered by the California Regional Water Quality Control Board, San Francisco Bay Region, to close by August 15, 1977. The decision to require closure of the Mussel Rock landfill came after a geologic study, made public in October, 1976, revealed that a large slide existed on the disposal site. The alternatives to closure of the site would have been removal of all garbage at the site or construction of a sufficient toe berm to prevent sliding. Either of these alternatives would have been enormously expensive.

~~being-withheld-pending-finalization-of-a-mutually-satisfactory~~
~~county-owner-agreement-as-to-administrative-and-control-features~~
~~pertaining-to-the-operation-and-use-of-the-facility.--An-enviren-~~
~~mental-impact-report-for-Corinda-los-Trancos-has-recently-been~~
~~accepted.~~ Prior to the commencement of disposal operations at
Corinda los Trancos, the county and the scavenger company worked
out a mutually satisfactory agreement as to administration and
control aspects of the operation and use of the facility.

The suitability of Apanolio for Class II disposal purposes has not been established to date. Except for a conceptual plan, no engineering report or environmental impact report has been processed. Also, the present owners indicate that portions of both Corinda los Trancos and Apanolio Canyons may be used for private development purposes and that no legal commitments have been made as to ultimate use.

Another unknown at this time is the extent to which on-coming material and by-product recovery processing systems will reduce landfill space requirements in the intermediate and long range periods, i.e., 1980-89 and 1990-2000. However, if sufficient space is provided to accommodate all the disposable wastes on land, then any reduction in disposable quantities will result in conservation of land resources by extending projected life-times of the landfills.

Several analyses have been made for evaluating both the capability of existing and planned final disposal facilities to satisfy projected requirements utilizing landfill disposal only and the effect upon the life spans of major landfills considering a variety of resource recovery processes at different localities. Results indicate that the potential exists for planned facilities to adequately accommodate county-wide needs for the foreseeable future provided that obstacles and restraints can be overcome. Furthermore, the effective life span of the Ox Mountain landfills can be extended for a considerable period of time by anticipating and introducing additional resource recovery processing at suitable locations.

Planning assumptions for these studies include the following:

- (a) All disposable wastes (except Class I) of the south coastal area will be disposed at the new Pescadero facility and will amount to about 1.0% of the county-wide requirement,
- (b) ~~The Mussel Rock may-replace-the-two-Colma-sites-by-1984-thereby~~
~~accommodating-21.5%-(includes-Daly-City,-Colma-and-Pacific)~~
~~of-the-county-wide-requirements.~~ landfill will be replaced
late in 1977 by a transfer-processing station, with output
directed to Ox Mountain.
- (c) ~~Operations-in-Corinda-los-Trancos-portion-of-Ox-Mountain~~
~~may-start-in-1976.~~

{d}

(c) Annual tonnage inputs for Corinda los Trancos will consist of percentages of the county-wide totals from disposal patterns at existing facilities as shown below.

	<u>Year</u> <u>Beginning</u>	<u>Percentages of</u> <u>County-wide</u> <u>Requirement</u>	<u>Source</u> <u>(1974 Facility)</u>
<u>1977</u>	1976	1.6%	Half Moon Bay
<u>1977</u>	1976	5.4%	100 Tons/Day From Marsh Road
	<u>1977</u>	<u>10.2%</u>	<u>Mussel Rock</u>
	1978	11.3%	Burlingame
<u>1980</u>	1978	11.3%	San Mateo
	1980	10.7%	Marsh Road-District Site
	1980	24.7%	Marsh Road-Scavenger Site (Remainder of Collection Area "E")
	1980	11.3%	Marsh Road-Scavenger Site (From Collection Areas "B" and "D")
	1984	1.2%	Nine-Par (Alviso) Site
	<u>2000</u>	<u>11.3%</u>	<u>Colma Sites</u>
		99.1%	

d {e} Of wastes generated in the disposal service area, 90% will require disposal processing.

e {f} Space capacity at Corinda los Trancos to design elevation of 1,000 feet is 8,300,000 cubic yards. This will accommodate 4,150,000 tons of refuse (1,000 pounds per cubic yard density).

f {g} A disposal operation in the Apanolio Canyon portion of Ox Mountain may be approved under either private or public ownership to a design elevation of 850 feet thereby adding about 26,000,000 cubic yards of space capacity.

g {h} The lifetime of the Ox Mountain facilities can be extended by initiating various resource recovery processing systems. For computing purposes, the systems selected together with potentials for reductions are tabulated in Table IV-11.

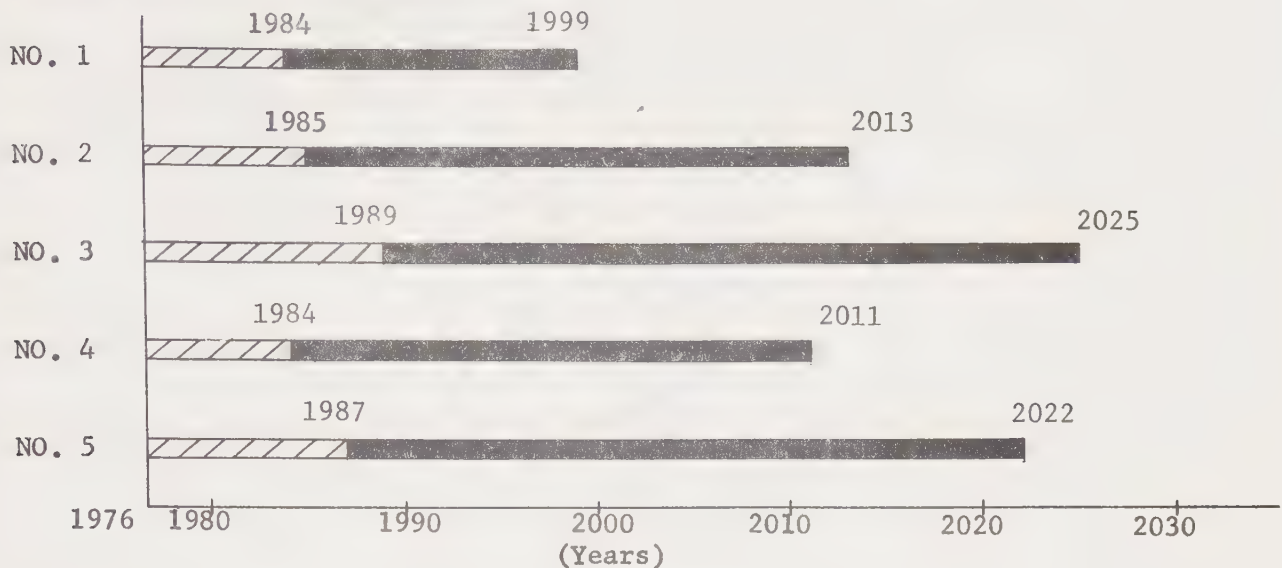
h {i} Reduced loadings from resource recovery activities may influence Ox Mountain inputs according to the following time schedule:

- (1) Beginning in 1978, a reduction of residential wastes through home separation of newspapers;
- (2) Beginning in 1980, a reduction in scavenger-collected wastes in Collection Service Area "E" resulting from ~~a~~ mechanized front-end recovery systems at the planned Redwood City and Northwest Regional Transfer-Processing Stations;
- (3) Beginning in 1985, a further reduction of the ~~above~~ Redwood City Transfer-Processing Station wastes by a full scale resource recovery operation in Service Area "E"; and
- (4) Beginning 1978 reduction through diversion of demolition wastes to land reclamation.

FIGURE IV-3
ESTIMATED LIFETIMES
OX MOUNTAIN FACILITIES

Considering Alternative Processing-Disposal Methods

ALTERNATIVE DISPOSAL SYSTEMS



BASIS:

- (1) The Ox Mountain Disposal Service Area will provide service for ~~77.5%~~ 87.8% of County-wide requirements until the year 2000 and for 99% thereafter.
- (2) Collection Service Areas are shown on Map IV-13.
- (3) Alternates No. 1, 2, and 3 include input from Collection Service Areas A, C, E and F as existing ~~bay-side~~ landfills terminate.
- (4) Alternates No. 4 and 5 add inputs from Collection Service Areas D and B.
- (5) Alternate No. 1 is based upon conventional landfill without any resource recovery.
- (6) Alternates No. 2 and 4 are based on landfill preceded by resource recovery with energy recovery starting in 1985/ in the Redwood City area.
- (7) Alternates No. 3 and 5 are based on landfill, resource recovery and diversion of all demolition wastes to land development use.

LEGEND


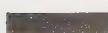
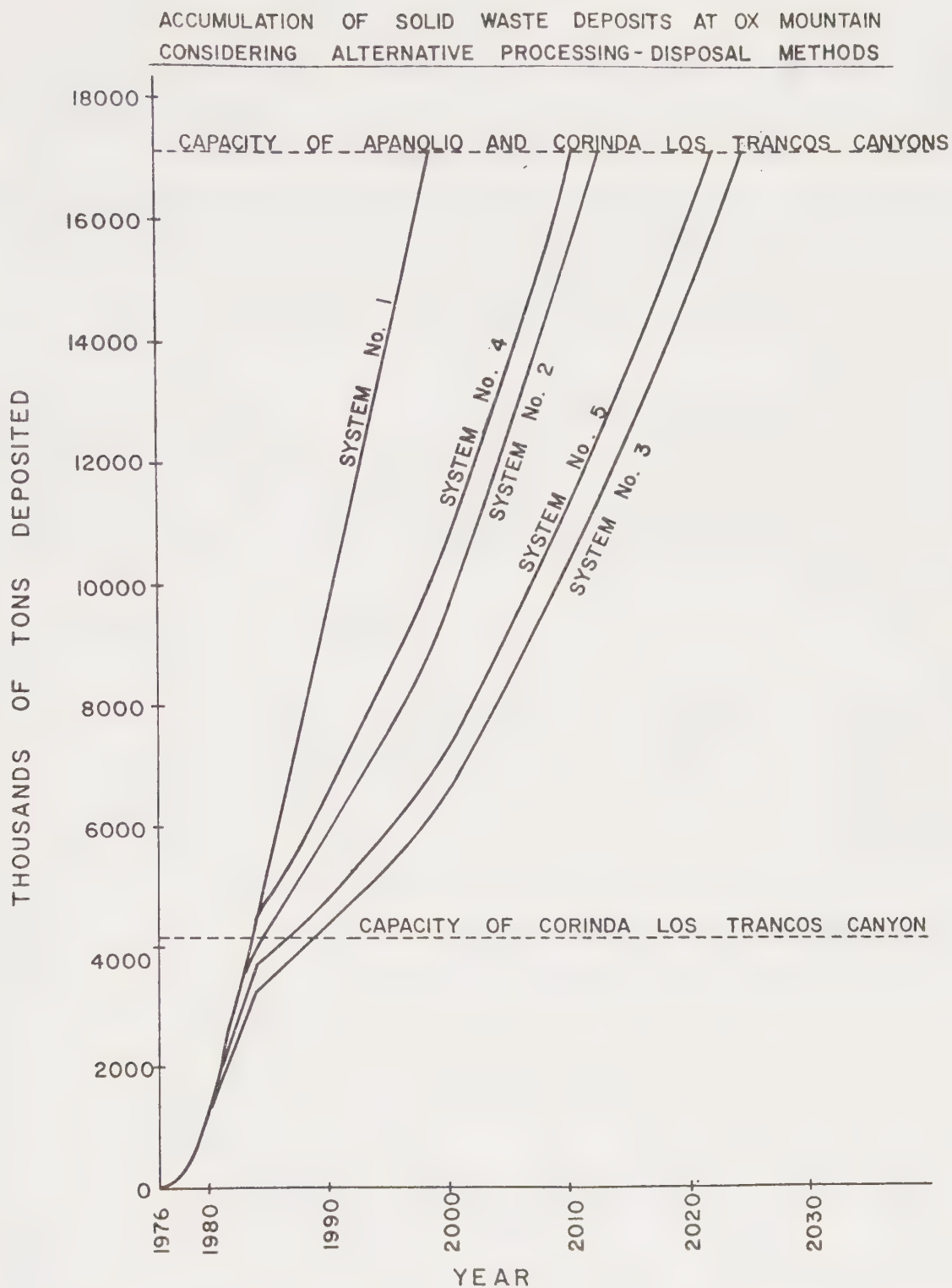
-  Corinda los Trancos Canyon Landfill
-  Apanolio Canyon Landfill

FIGURE IV-4



CHAPTER X

PLAN FORMULATION

The Solid Waste Management Plan, like any other plan, represents a summation of goals or objectives. The objectives must be consistent with general conditions or realities on which consensus can be assumed.

The basic goal of the San Mateo County Solid Waste Plan is to provide management of solid wastes in the most efficient and economical manner that will provide adequate services, protect the public health, prevent the creation of nuisances, reduce waste generation, conserve our natural resources and energy, provide for maximum resource recovery from solid waste and enhance the beauty and quality of our environment.

Plan objectives and policies listed below indicate how the plan is derived and on what basis it may be carried out. They have been arrived at jointly by the county staff members responsible for development of this report and the appointed Solid Waste Advisory Committee including representatives from each city, East Palo Alto, industry, the general public and the South County Garbage and Refuse Disposal District. The plan which follows is recommended for adoption by city councils and the County Board of Supervisors.

A. PLAN OBJECTIVES AND POLICIES

1. Objectives

- a. To assure the availability of high-standard, long-term solid waste facilities to all citizens, industries, districts, cities within San Mateo County and their servicing scavenger companies on a continuing and a non-discriminating basis.
- b. To assure the availability of conveniently located public rubbish collection points for general public dumping.
- c. To encourage the recovery of by-products from solid waste and provide for the timely utilization of technological advances in the fields of materials recovery and energy recovery.
- d. To provide long-term landfill disposal capability for non-recoverable wastes and residues from resource recovery operations and for contingency purposes.
- e. To maintain and periodically review a coordinated long-range, environmentally advantageous and economically feasible program to guide solid waste collection and disposal.
- f. To assign the respective responsibilities of government and private industry in solid waste management.
- g. To recommend methods for implementing and financing such plan as may be adopted.

- h. To recognize and coordinate with such long-range San Francisco Bay Area regional solid waste plan as may be officially adopted in the future.

2. Policies

- a. That the County Board of Supervisors be the lead agency to coordinate the planning, implementation and management of solid waste disposal activities of county-wide interest on a continuing basis.
- b. That within their respective jurisdictional areas, the county and city governments retain jurisdictional authority and responsibility for litter control and collection activities and for transfer, processing or final disposal facilities located therein with the understanding that all new facilities shall conform to the county-wide plan as adopted or as may be amended.
- c. That within its own jurisdiction, each city and the county shall be committed as follows:
 - (1) To approve the location of and permits for transfer and processing facilities as indicated in the solid waste management plan;
 - (2) To terminate existing conventional landfill facilities in an orderly manner as indicated in the plan;
 - (3) To review its policies regarding storage and collection standards and financing of collection services to satisfactorily meet requirements of the local health officer pertaining to health and sanitation;
 - (4) To adopt and enforce standards for solid waste handling and disposal which are equal to or stricter than the minimum state-wide standards; and
 - (5) To determine what level of general public dumping service, if any, is to be provided for its residents and to make such arrangements as may be required, whether within or outside of its own area.
- d. That transfer or processing facilities other than research projects be based on technology that is either proven or sufficiently close to operational feasibility to be reliably predictable.
- e. That resource recovery efforts by the private sector through separation of materials at the source, through hand sorting or mechanical front end separation at transfer facilities, through methane recovery at landfills, through energy recovery or other waste conversion, and through reclamation of completed landfill sites whenever practical or feasible be encouraged by all governmental agencies.

- f. That reduction in the volume of all wastes be encouraged through information provided to the public and industry by the plan administrator and through the use of governmental specification and other purchasing capabilities to expand the market for recycled materials.
- g. That conservation of Class II sanitary landfill space be encouraged through the processing of demolition wastes for ferrous metal recovery or for reuse as construction materials or as fill material in land development and improvement projects.
- h. That the County seek assurance from the State that Class I disposal facilities will be available for the County of San Mateo as may be required to adequately protect the environment and the public interest.
- i. That the County undertake a positive program of data collection to document the source, nature and magnitude of Group 1 waste production in the county to be completed by in June 30, 1977.
- j. That, with respect to Corinda los Trancos Canyon, development be continued by the owner subject to conditions of the use permit and related agreements between the owner and the County Board of Supervisors consistent with the adopted plan.
- k. That Group 2 municipal-type wastes produced in San Mateo County and delivered in accordance with the adopted plan by public agencies, their servicing scavenger companies or the general public, shall be accepted at new landfill, transfer or processing facilities (not including public rubbish collection points) on an equal, non-discriminating basis.
- l. That designations of collection or disposal service areas in the county-wide plan shall not infringe upon existing rights of any city government or other authorized governmental agency to terminate franchises or to change franchisees.
- m. That after approval of the solid waste management plan, no one is to establish solid waste disposal, transfer stations, waste processing, or resource recovery sites that are not in conformance with the plan.
- n. That the County Board of Supervisors designate (1) the Engineering Department as having primary staff responsibility for plan administration, keeping abreast of solid waste technology, and technical liaison with elements of local, state and federal governments, private enterprises and civic groups concerned with solid waste management, (2) the County Public Health and Welfare Department as having staff responsibility for providing inspection and for enforcing state and local statutes and regulations in the environmental health and sanitation aspects of storage, collection, handling, transporting and disposal of solid wastes on a county-wide basis, and for developing code changes, conducting studies and recommending improved methods in those subject areas to the county or cities in the county and (3) the Planning

Department and Commission having the responsibility for maintaining the Solid Waste Management Plan as an element of the County General Plan insofar as the plan relates to the unincorporated area.

- o. That the status of the county-wide solid waste program be reviewed annually by the County Board of Supervisors and the adopted solid waste management plan be updated as needed and at least every three years. Significant changes to the approved plan shall be recommended to the Board of Supervisors by the Regional Planning Committee. A representative of the scavenger industry should be included as an ad hoc member of any RPC subcommittee charged with reviewing changes to the plan. Significant changes shall be referred to cities by the Board of Supervisors and be subject to approval by both a majority of cities containing a majority of the population of the incorporated area of the county and by the County Board of Supervisors.

B. MAJOR FEATURES OF RECOMMENDED PLAN

Although there are various options for improving solid waste management practices and providing essential disposal services without interruption, the major problems still to be resolved for meeting the above recommended objectives and policies require mutual agreement between local governments and between governmental elements and the private enterprises which provide collection and disposal services. These involve waste handling methods, facilities, financing, regulation, and administration. Summarized below are those evaluations which as a whole represent the major features of a Solid Waste Management Plan recommended for San Mateo County.

1. Facilities and Resource Recovery Plans

The key elements of the County plan are the area-wide facilities needed for handling, processing and disposing of solid wastes after collection, and the scheduling of activities to achieve resource recovery objectives.

Pending a final selection of such long-term type of resource recovery system that can be anticipated, the facilities plan should not only be adequate for short-term needs, but should be adaptable to the longer term systems. Some new facilities for the short and medium terms will be needed regardless of the type of full-scale recovery system selected for the future. Until a full-scale resource recovery program can be implemented, an interim plan for recovery of resources is needed which is consistent with and complementary to the types of facilities that now exist or that are to be developed for the future.

Contained in Table X-1 is the proposed facility plan for the county-wide area showing type and locations of facilities for different time periods. Included are existing facilities with estimated termination dates and new facilities to be added for satisfying plan objectives. The plan visualizes establishment of public rubbish collection points at or near existing landfills and

TABLE X-1

PROPOSED FACILITY PLAN
FOR
SAN MATEO COUNTY

Short Term 1975-1979			Medium Term 1980-1989		Long Term 1990-2000
1974	1976	1978	1980	1984	2000

LANDFILLS

Daly City	Daly City	Daly City	Daly City	Daly City	Pescadero
Colma (J.S.)	Colma (J.S.)	Colma (J.S.)	Colma (J.S.)	Colma (J.S.)	Ox Mountain
Colma (H)	Colma (H)	Colma (H)	Colma (H)	Colma (H)	
Burlingame	Burlingame	Menlo Park	Pescadero	Pescadero	
San Mateo	San Mateo	Pescadero	Ox Mountain	Ox Mountain	
Menlo Park	Menlo Park	Ox Mountain			
Pescadero	Pescadero	<u>San Mateo</u>			
Half Moon Bay	Half Moon Bay				
	Ox Mountain				

TRANSFER-PROCESSING STATIONS

S. San Fran.*	S. San Fran.	S. San Fran.	S. San Fran.	S. San Fran.	S. San Fran.
San Bruno	San Bruno	San Bruno	San Bruno	San Bruno	San Bruno
		<u>NW Regional</u>	Redwood City	Redwood City	Redwood City
			<u>NW Regional</u>	<u>NW Regional</u>	<u>NW Regional</u>

PUBLIC RUBBISH COLLECTION POINTS

Belmont	Belmont	Belmont	Belmont	Belmont	Belmont
	Pacific	Pacific	Pacific	Pacific	Pacific
	Colma	Colma	Colma	Colma	Colma
		Half Moon Bay**	Half Moon Bay	Half Moon Bay	Half Moon Bay
		Burlingame	Burlingame	Burlingame	Burlingame
		San Mateo	San Mateo	San Mateo	San Mateo
			Menlo Park	Menlo Park	Menlo Park
				Woodside or	Woodside or
				Portola Valley	Portola Valley

NOTE: Indicates facilities in these approximate locations projected for the year as shown.

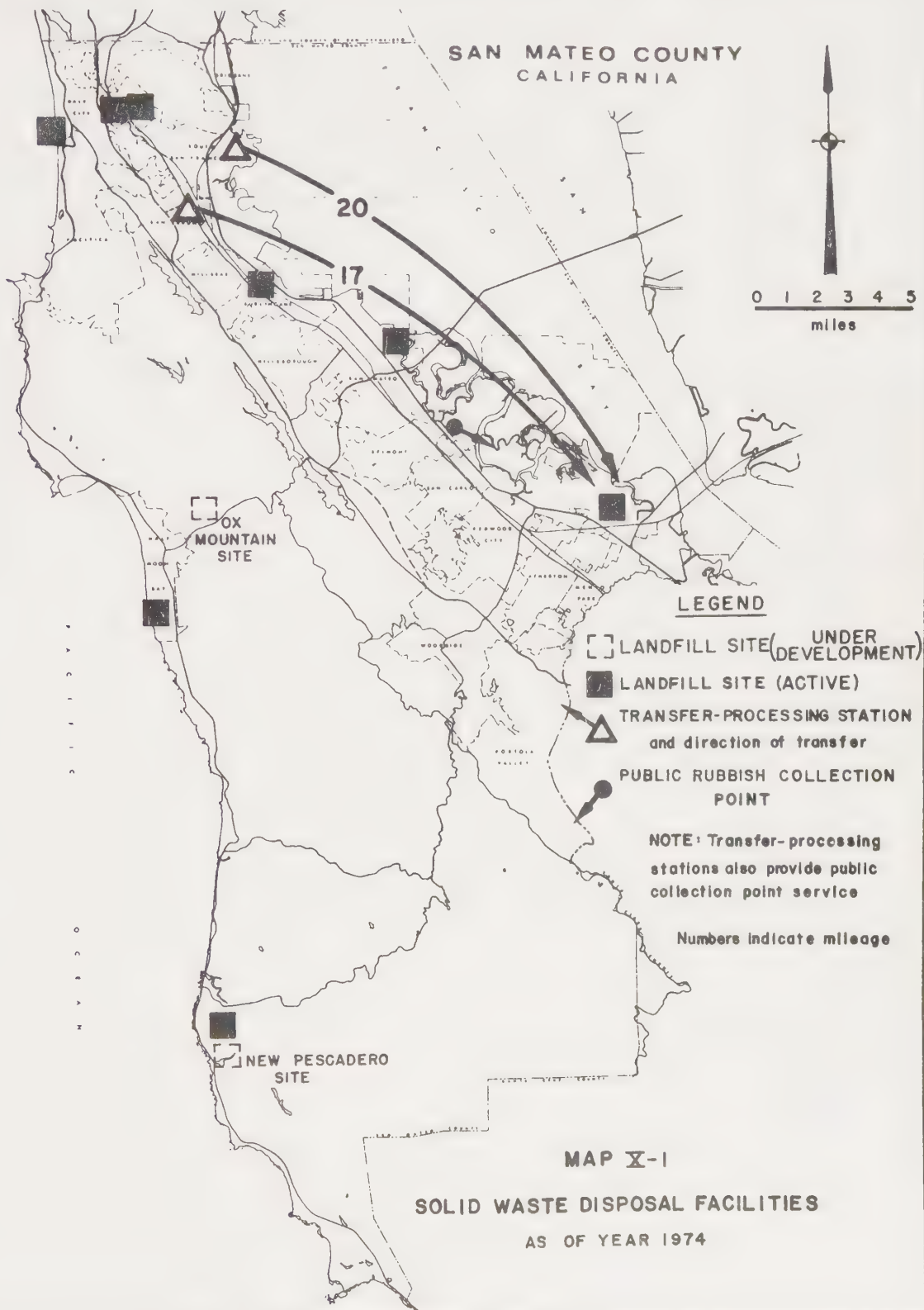
*Public rubbish collection service is now being provided at the South San Francisco Scavenger Company Transfer-Processing Station.

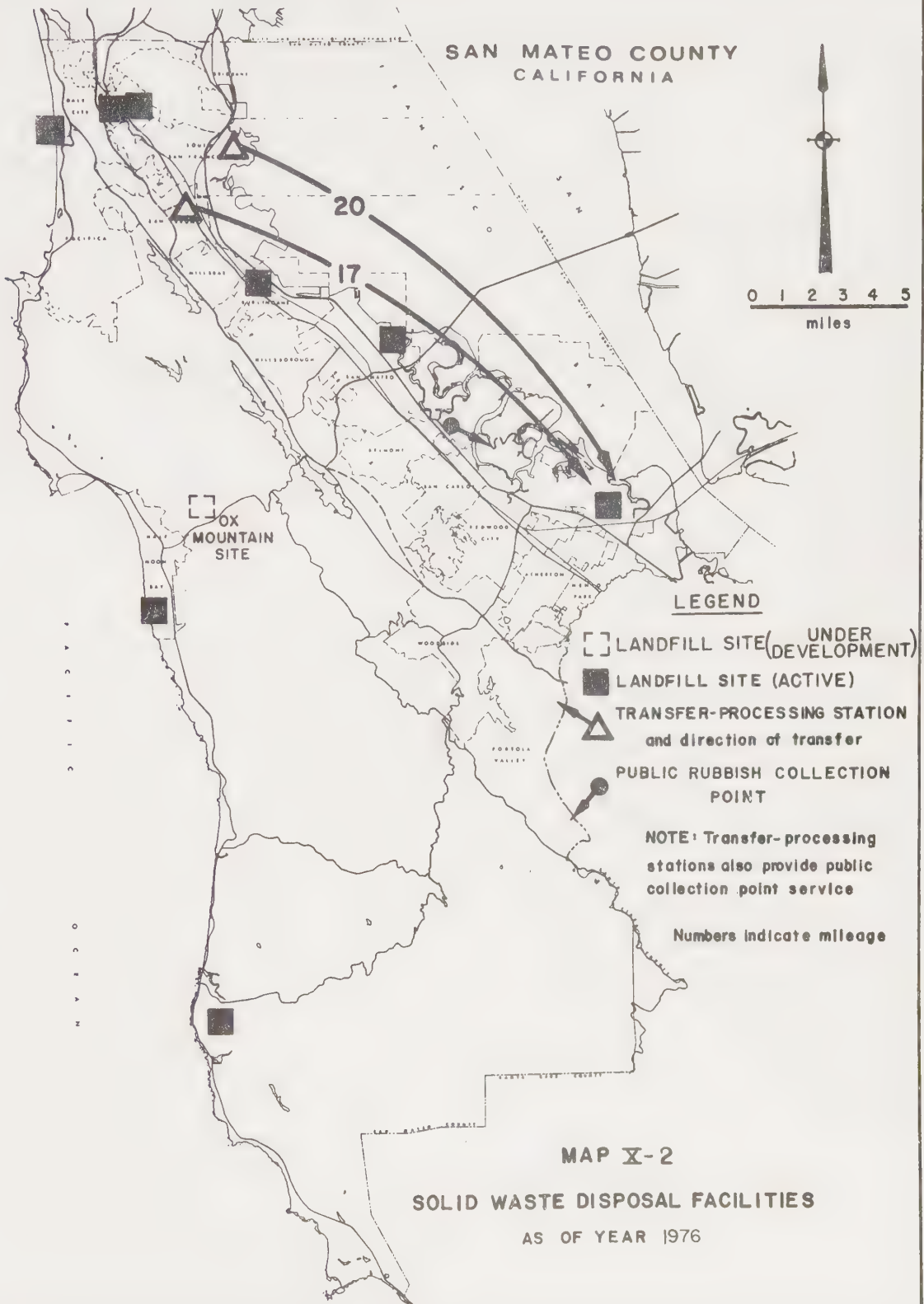
**Due to the close proximity of the Ox Mountain landfill to the City of Half Moon Bay, general public dumping services can be provided either directly at the landfill site or at an off-site location. The former solution will add to traffic on Highway 92. The other will add to user disposal charges. The City Council has indicated its desire to test the situation before a final decision to establish an off-site public rubbish collection point is made. Consequently, development of a separate public rubbish facility in the City of Half Moon Bay is optional and subject to future consideration by the City Council.

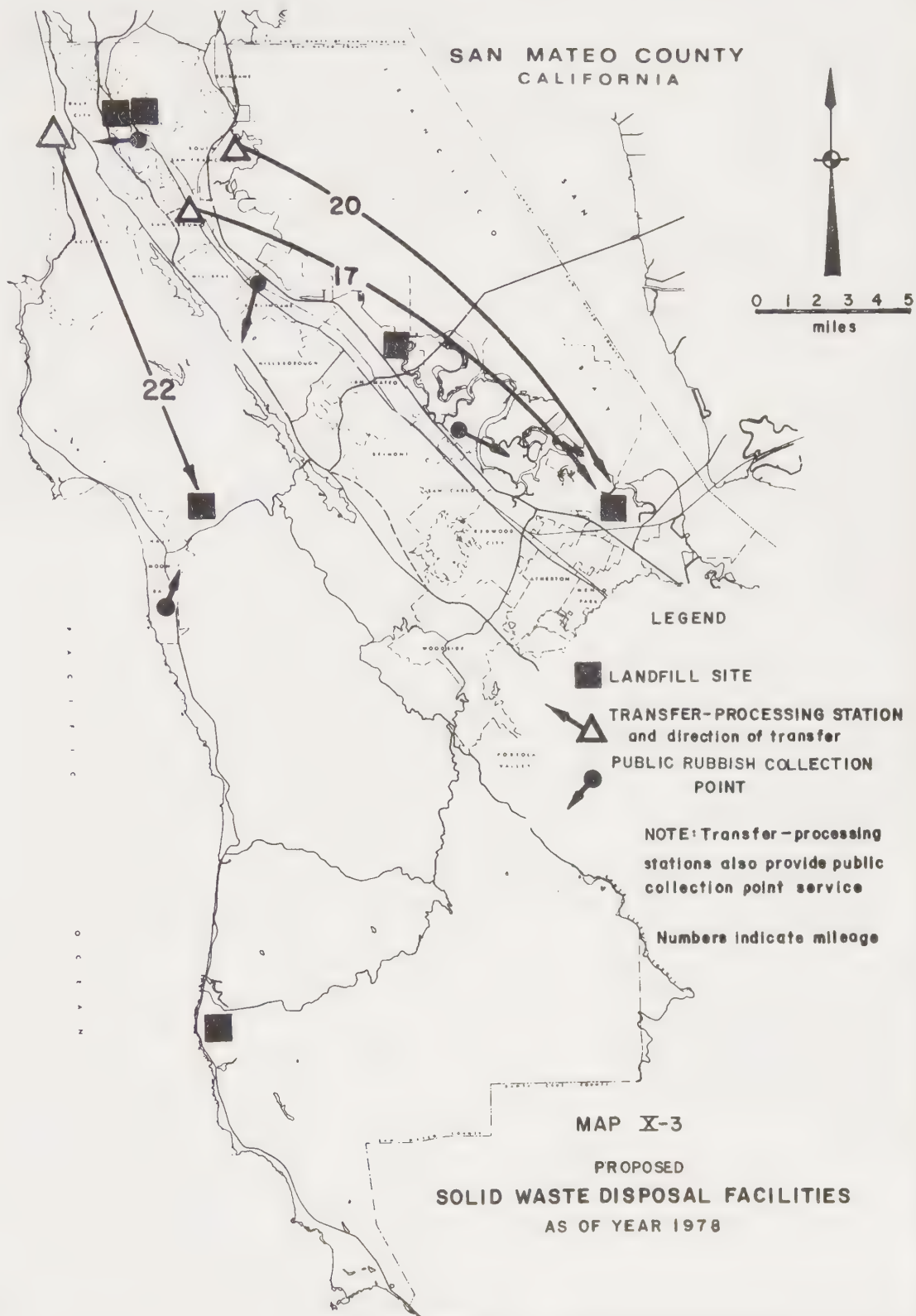
needed to continue existing general public dumping services as landfills are closed. These represent a minimum number of such facilities. The plan does not preclude cities from establishing additional public rubbish collection points to better serve local residents. Also included is a large transfer-processing facility in the vicinity of Redwood City for continuing franchised collection services when the major bay-side landfill located in Menlo Park is ended. The new facility will enable better resource recovery from Collection Service Area "E" (see Map IV-13) and will enable consolidation of franchise-collected refuse for transport to the Ox Mountain facility. Both existing and projected facilities are also located on a series of maps keyed to significant years. (See Maps X-1 to X-6 inclusive).

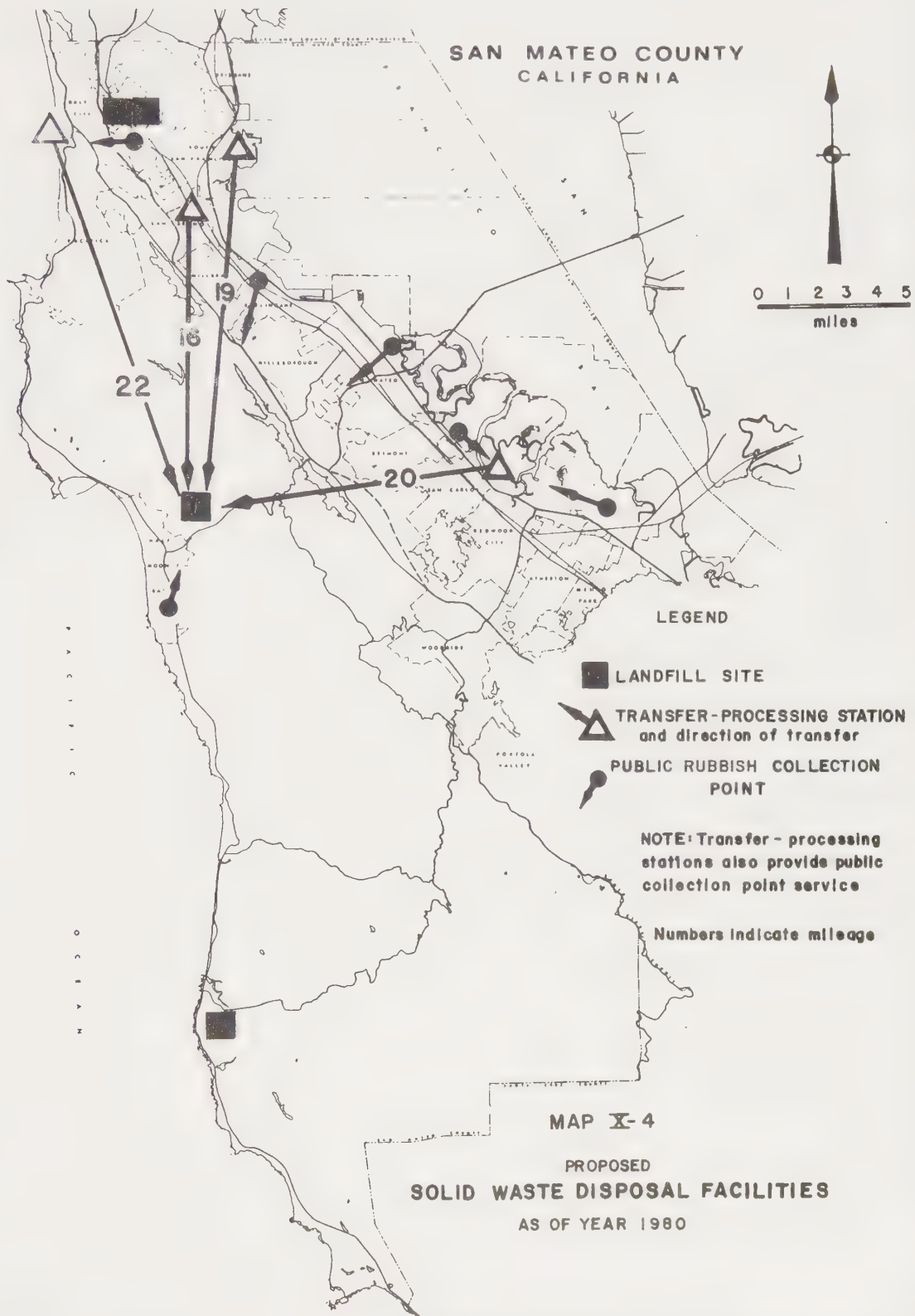
Not included in the proposed facility plan nor on the maps are the existing Group III waste recycling operation in Brisbane and the currently proposed pilot pyrolysis plant at the Port of Redwood City. The latter facility is proposed by Pyro-Sol, Incorporated to process a maximum of 100 tons of refuse per day. The refuse will be derived primarily from automobile interiors from an adjacent scrap metal processing plant, but will use a limited amount of capacity available for testing the system's capability for processing of shredded municipal solid waste. The materials produced by the pyrolysis process will be a mixture of combustible gases; non-combustible gases, water, and marketable solid residues. The gases will be used to fire the pyrolysis reactor and to produce steam to generate electricity for transmission to an adjacent P.G.&E. substation. The non-marketable inert residue will be used as on-site fill material. Inasmuch as this facility will, on a continuing basis, serve the disposal needs of an existing industrial activity, its identification as a part of this plan is required. The utilization of this facility for the processing of municipal waste is limited solely to a pilot small scale, less than 30 tons per day, facility; and therefore, is not being considered or approved as having any significant potential for reducing the projected solid waste stream. It is therefore judged to be in keeping with the Solid Waste Management Plan, but not an element of it.

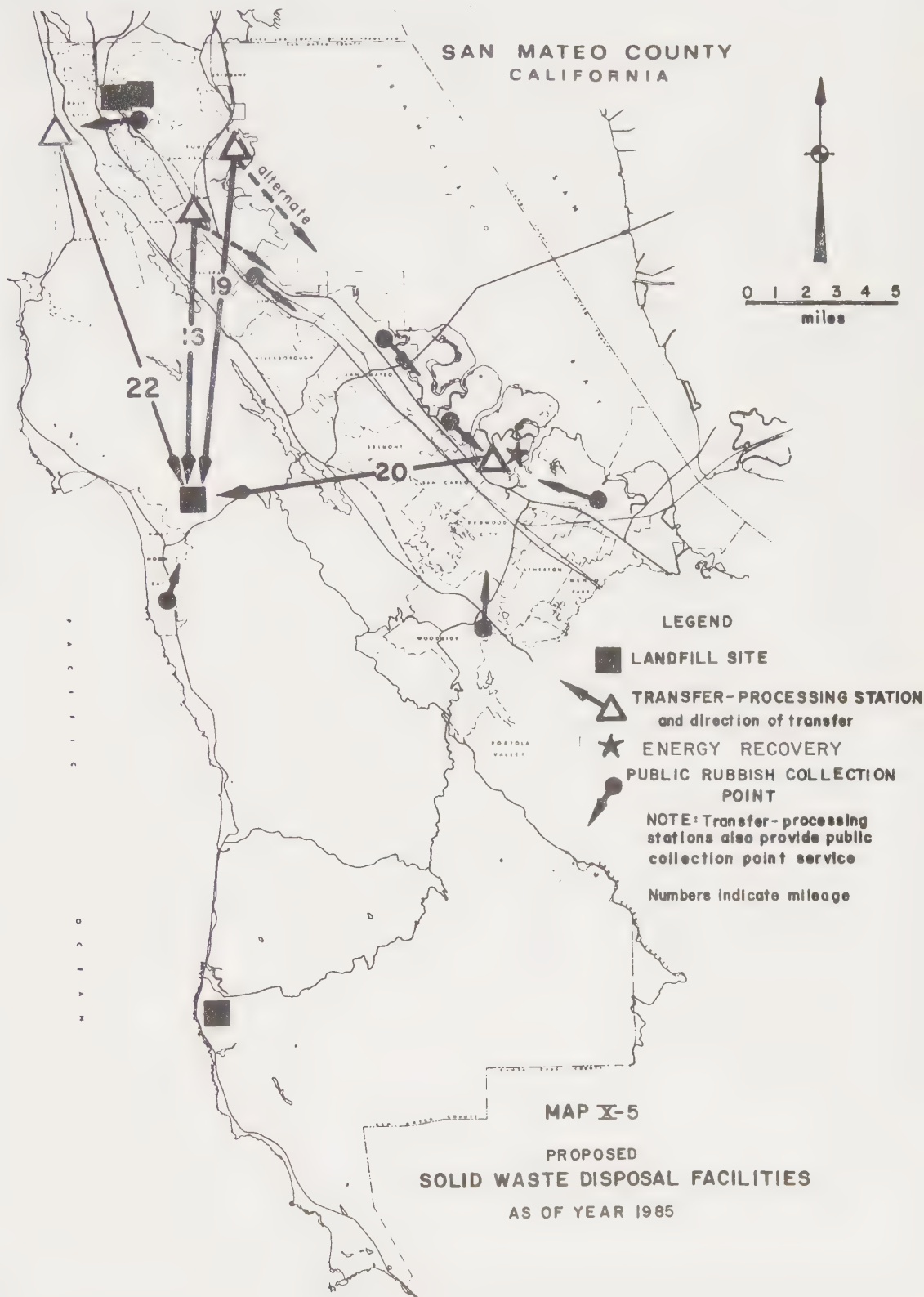
A summary of the proposed resource recovery plan for the county-wide area is contained in Table X-2. Full implementation will largely depend upon the sale of materials or by-products to at least off-set the costs of the processing operations. The possibility of a commercial venture for successfully recovering methane as a by-product appears to be greater for the projected Corinda los Trancos landfill operation than for any existing landfill activity. To determine the economic feasibility of such a project, necessary investigations should be started at an early date. If a gas recovery project is determined to be economically feasible, design and development of the recovery system should be made in the early stages of the landfill development to enable gas recovery in subsequent years.











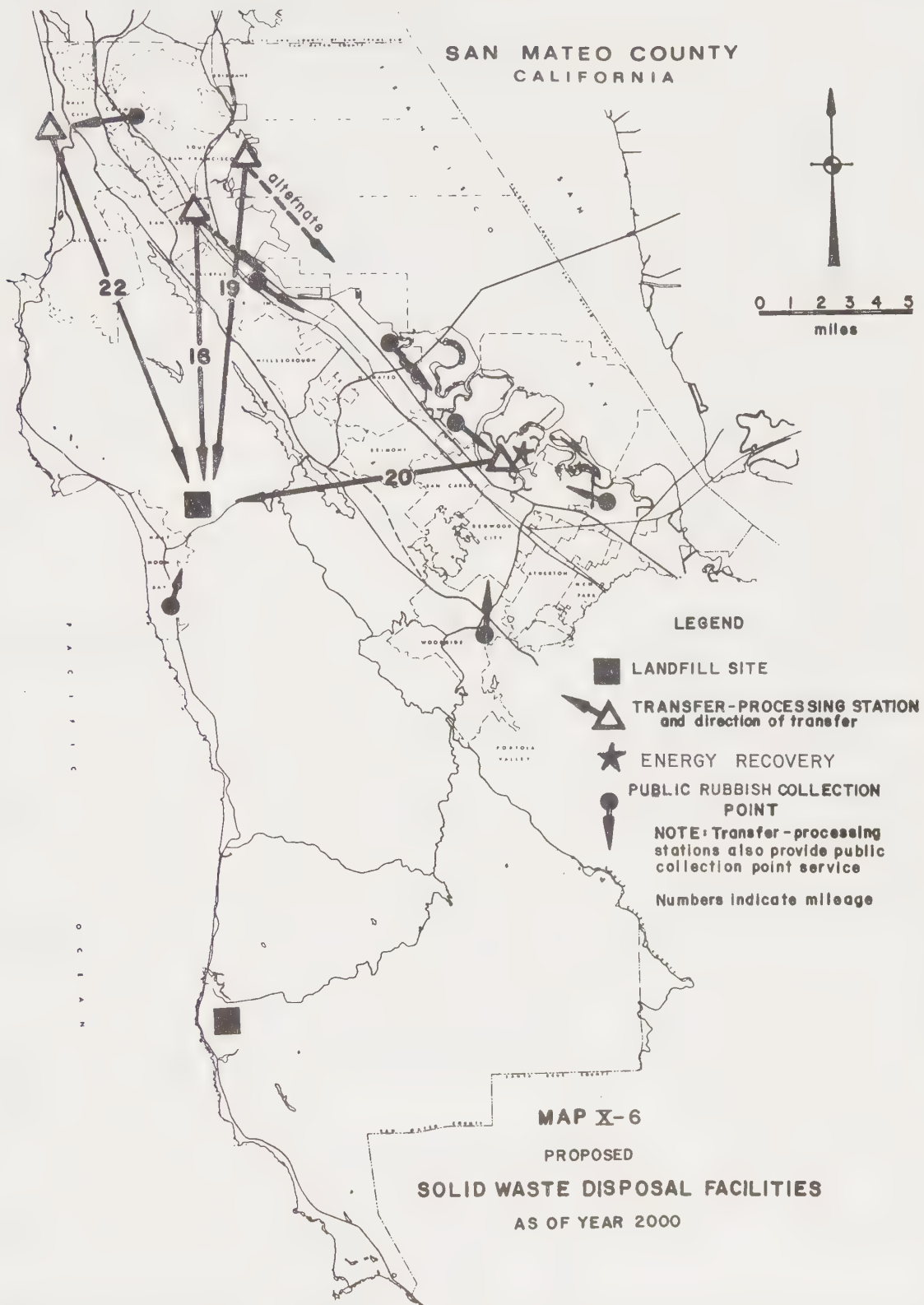


TABLE X-2
PROPOSED RESOURCE RECOVERY PLAN
for
SAN MATEO COUNTY

<u>YEAR</u>	<u>METHOD</u>	<u>LOCATIONS</u>	<u>REMARKS</u>	<u>TERM</u>
1976	Voluntary Recycling	Local Volunteer Recycling Projects (see Table IV-4)	As established on a volunteer basis	Short Term 1975-1979
1976	Voluntary Recycling	Public Rubbish Collection Points at Pacifica and Colma	Municipally or Privately Sponsored	
1976	Hand Sorting of Re-saleable materials	Transfer-Processing Stations	Goal for recovery 6%	
1976	Methane Gas Recovery from Landfill	Daly City (Mussel Rock) Corinda Los Trancos (Ox Mountain)	Owners to investigate economic feasibility of a self-sustaining operation. If practical, development of needed facilities should be initiated at the appropriate time.	
1978	Home Separation of Newspapers	Individual residences	Goal to reduce residential wastes by 15%. Can be collected separately either by franchised collector or by volunteer collection activities	Medium Term 1980-1989
1978	Voluntary Recycling	Public Rubbish Collection Points at Burlingame, San Mateo and Half Moon Bay	Municipally Sponsored	
1978	Diversion of a major portion of demolition materials from Class II landfills	Diverted to approved land developments or land reclamation projects or to commercial activities for recycling of saleable materials	Goal to conserve Class II landfill space by 16%	
1980	Recovery of marketable products utilizing a front-end materials recovery system	Transfer-Processing Station in Redwood City Area	Goal to reduce residential and commercial wastes from collection service Area "E" by 13%	
1980	Voluntary Recycling	Public Rubbish Collection Point at Menlo Park	Municipally Sponsored	Medium Term 1980-1989
1984	Voluntary Recycling	Public Rubbish Collection Point at Colma and at Woodside or Portola Valley	Privately Sponsored at Colma. Municipally Sponsored at Woodside or P.V.	
1985	Energy Recovery through rear-end processing of non-recyclable Group 2 type wastes	In conjunction with processing activities of the transfer-processing facility in the Redwood City area	Goal to reduce residential and commercial tonnages from the Service Area by 70%.	

2. Institutional Arrangements

The numerous regional, state and federal agencies involved in solid waste management are listed in Chapter IV under Jurisdictions and Authorities. While these agencies have regulatory authority, they are not normally involved directly in initiating solid waste facilities. Generally speaking, local governments must interface with franchised collection enterprises in the establishment of processing-disposal facilities. In accord with the policy assumptions that guided development of this report, it is felt that all short and medium-term elements of the plan can be carried out without creating new institutional arrangements other than the designation of an enforcement agency. As full-scale energy recovery comes into closer view, it may be desirable to investigate methods of obtaining public financial assistance to provide added incentive to accomplish this objective within the specified time frame.

3. Financing Plan

~~The interface between local governments and franchised collection enterprise in financing waste handling systems relates primarily to the establishment of processing-disposal facilities rather than to the operations of collection services.~~ Historically in the San Mateo/^{County} area, private collection enterprises have financed or prefinanced most of the capital investments needed to establish and operate waste handling systems. In some cases, communities have later acquired landfill facilities through various arrangements with franchised collection companies. In light of changing conditions, current uncertainties and escalating requirements for investment capital, it is doubtful that individual enterprises can, in all cases, provide guaranteed assurances that initial capital commitments can be made on a timely basis. Some combination of public-private financing may be appropriate. It does appear, however, that regardless of the method of facility financing, the budgeting responsibility, at least for the initial capital investment, should rest with the local government in whose jurisdiction the facility is located.

Capital investments for all landfills and transfer-processing facilities shown in the proposed facilities plan (Table X-1) have already been made by the private or public owners except

for the proposed Redwood City transfer-processing station and for some remaining development of the Ox Mountain landfill facility whereas only the public rubbish collection point at Belmont is in existence. Considering the entire proposed short, medium and long-term facility plan, additional capital investments will be needed for the following purposes:

- a. Completion of the Corinda los Trancos development and possibly for some land acquisition.
- b. Acquisition and development of two additional transfer-processing stations only/^{both} of which (in the vicinity of are ~~Redwood City~~) is needed in the short or medium terms.
- c. Acquisition and development of at least ^{six} ~~seven~~ additional public rubbish collection points, ^{three} ~~four~~ of which are needed in the short-term. (Half Moon Bay, Pacifica, Burlingame and San Mateo).
- d. Planning and investigations as needed to obtain approvals for Apanolio Canyon concept.
- e. Preparation and development of Apanolio landfill facility possibly including additional land acquisitions and the establishment of monetary reserves as may be appropriate.
- f. Necessary transfer vehicles or other items of equipment as may be required to handle or process refuse in connection with the establishment of transfer-processing stations and public rubbish collection points.

For the purpose of this report, the following preliminary estimates of initial capital investments needed in the short-term period are assumed to be reasonable for the most urgent projected facilities:

a. Redwood City transfer station, excluding land acquisition	\$2,500,000
b. Front end material recovery facility and equipment at Redwood City transfer station	2,800,000
c. Two public rubbish collection points at Burlingame and San Mateo excluding land acquisition	1,040,000
<u>Northwest Regional Transfer Station</u>	<u>\$700,000</u>
d. One public rubbish collection point at Pacifica excluding land acquisition	280,000
e. One Public Rubbish Collection Point at Half Moon Bay	75,000

In the expectation that Browning-Ferris Industries may prefer to continue to finance the development of the Corinda los Trancos portions of their Ox Mountain facility without outside assistance, no estimate of such a requirement has been attempted. However, in the event that public ownership of Ox Mountain becomes a mutually

acceptable objective, the acquisition costs may be in the order of \$2,500,000 to over \$4,000,000.

Pending a final selection of a long-term resource recovery system for this area, it appears premature to plan for the sizeable capital investments that will be needed. Based upon information now available, such a facility, to accommodate the potential waste loading from Service Area "E" may be expected to cost between \$31,000,000 and \$49,000,000 dependent upon the alternative selected.

A financing plan for implementing the proposed facilities and resource recovery plans is summarized in Table X-3. The plan is based primarily upon "pay as you go" financing from collection fees and user charges to defray operating costs. It provides flexibility to local governments for financing of initial capital investments through either public or private sources.

TABLE X-3
PROPOSED FINANCING PLAN
FOR
SOLID WASTE MANAGEMENT SYSTEMS
SAN MATEO COUNTY

<u>FACILITY OR ACTIVITY</u>	<u>ASSUMPTIONS</u>	<u>TYPE OF FINANCING</u>	<u>METHOD</u>
Franchised Collection Systems and Services	Private Ownership and Operations	Private	Recovery through user collection fees or through service district charges (East Palo Alto).
Municipal Collection Systems and Services	Public Ownership and Operations (City)	Public	General Fund.
Volunteer Recycling Centers	Private or Public Ownership and Operations	Private or Public	Recovery costs through revenue from resale of recycled materials.
Public Rubbish Collection Points Including Land, Facility Development and Operations	Public Ownership (Cities at following locations: Belmont, Burlingame, San Mateo, Menlo Park, Woodside or Portola Valley	Public	Financing of capital investments as determined by cities which may include advance financing by private collectors.
			Recovery of operating costs through user disposal charges or collection franchise arrangements.
	Private Ownership at Colma	Private	Recovery of operating costs through user disposal charges.
	Private or Public Ownership at Half Moon Bay and Pacifica	Private or Public	Financing of capital investments as determined by city and County.
San Bruno and South San Francisco Transfer-Processing Stations	Private Ownership	Private	Recovery of operating costs through user disposal charges supplemented by governmental subsidy if required at H.M.B.
San Bruno and South San Francisco Transfer-Processing Stations	Private Ownership	Private	Recovery through user collection fees.
<u>Northwest Regional and Redwood City Transfer-Processing Stations</u>	Private Ownership	Private	Advance financing of capital investments by operator with public financial assistance if necessary. Recovery of costs through user collection fees and revenues from resource recovery activities.
Landfills at Daly City, Burlingame, San Mateo and Menlo Park	Public Ownership (City)	Public	Advance financing of capital investments by operator.
	Private Operation		Recovery of capital and operating costs through user disposal charges to be reflected in collection fees for franchised collected refuse.

TABLE X-3 (Continued)

<u>FACILITY OR ACTIVITY</u>	<u>ASSUMPTIONS</u>	<u>TYPE OF FINANCING</u>	<u>METHOD</u>
Colma Landfills	Private Ownership	Private	Recovery of costs through disposal charges and revenues from recovery activities.
Pescadero Landfill	Public Ownership (County)	Public	Financing of capital investments from County General Fund.
	Private Operation		Recovery of operating costs through combination of user charges and governmental subsidy.
Ox Mountain Landfills Including Corinda los Trancos Canyon and Apanolio Canyon (Subject to Approval of a Disposal Permit)	Alternate A Private Ownership and Operation	Private	Advance financing of capital investments by private owner. Recovery of investment and operating costs through disposal charges except for land amortization. Disposal charges to be reflected in collection fees for franchise-collected refuse.
	Alternate B Public Ownership (County)	Public	Capital investment for site acquisition to include Apanolio Canyon to be publicly financed by the County under the following alternatives:
	Private Operation		
NOTE: According to the Park and Open Space element of the general plan, eventual acquisition of the two Ox Mountain canyons is shown for park and open space uses.			(a) "Pay as you go" financing from surcharges on the disposal charge at the Corinda los Trancos operation. (b) Revenue sharing funds. (c) Park acquisition funds. (d) County General Fund. (e) Revenue bonds.
Areawide Planning and Investigations	County Government Responsibility for Coordinating Both the Planning and the Necessary Financing		
(a) Staffing		Public	County General Fund
(b) Special technical studies and investigations		Public or Private	"Pay as you go" financing such as: (a) Apportionment to city and County General Funds (b) County General Fund (c) Private financing under appropriate circumstances.

C. IMPLEMENTATION

1. Programs

As the financing plan described above indicates, the major responsibility for construction of facilities will rest with private enterprise. Other aspects of implementation, which remain for government, include the administrative programs and ordinances necessary to achieve the goals of the plan.

Although numerous federal and state agencies are involved in regulating various aspects of solid waste handling systems, the principal agencies for regulating local systems are the State Solid Waste Management Board and the local general purpose governments. In San Mateo County it is proposed to assign staff responsibilities as described in Chapter VI (pp. VI-2 and 3). Plan administration and execution would be placed under the Department of Public Works while enforcement of the environmental health and sanitation aspects of storage, collection, handling, transporting and disposal standards and regulations would come under the Department of Public Health and Welfare. Inasmuch as Title 7.3 of the Government Code, as amended by the Z'Berg-Kapiloff Solid Waste Control Act of 1976, calls for the naming of an enforcement agency to carry out a program for the issuance of permits for the operation of solid waste facilities and for inspecting their operation, it is proposed to name the Department of Public Health and Welfare as the Enforcement Agency for all of San Mateo County.

The Z'Berg-Kapiloff Solid Waste Control Act of 1976 also calls for naming of a hearing panel of five persons appointed by the local governing body. Following a recommendation of the San Mateo County Solid Waste Advisory Committee, it is proposed to have the County Board of Supervisors name an independent hearing panel.

While the Department of Public Health and Welfare is already organized to issue permits and to inspect facilities, additional manpower will be needed to carry out the new provisions of Title 7.3. Financing of this activity can be accomplished from various funds which can also change from one year to the next. The financing includes funds: (1) generated by surcharges at the Ox Mountain Sanitary Landfill in accordance with the operating agreement between the County and the San Mateo County Scavenger Company; (2) generated by fees to be charged solid waste facility operators as authorized by Section 66796.20 of the Government Code; and (3) generated by taxes included in the General County tax levy.

The San Mateo County Garbage Regulations ordinance needs to be updated, as do most city solid waste ordinances. As the Enforcement Agency, the Department of Environmental Health will review the ordinances from the standpoint of ensuring conformity with current State standards and the County Solid Waste Management Plan. Special attention will be given to litter prevention, illegal dumping, and achieving universal subscription to refuse collection service.

There are many aspects of litter control that need continual surveillance - illegal dumping, littering of waters, highways, private business establishments such as drive-ins and service stations, and careless refuse storage practices at apartment houses and single-family homes. A special problem with regard to illegal dumping is the matter of "white goods", large items such as refrigerators and water heaters which are inconvenient for members of the general public to dispose of properly.

While the more familiar aspects of the littering problem appear well in hand in San Mateo County because of good policing by the cities and the county, it would be well to anticipate expenditure of some public funds for continued educational programs and support of occasional "clean-up days" in selected locations.

Although the need for ordinance revision is fairly obvious, the process of dealing with approximately twenty jurisdictions requires considerable manpower. In order to distribute available human resources most effectively, it will be necessary to accomplish the work over an extended period of time.

One of the ongoing needs in a solid waste management program is good data retrieval. Table X-4 indicates the Data Collection System which is offered as a prototype for all solid waste management facilities. This is a modification of the system currently in use at the Ox Mountain Sanitary Landfill which system was developed in accordance with the operating agreement between the County and the San Mateo County Scavenger Company, owner-operator of the landfill. Pursuant to Section 66796.35 of the Government Code, the Enforcement Agency for San Mateo County should require such a reporting system for all solid waste facilities (landfills and transfer/processing stations) within its jurisdiction, and issue an annual summary to the San Mateo County Department of Public Works. This Department is charged with responsibility for technical liaison with various elements of government, private enterprises and civic groups and, as such, is the appropriate agency to develop statistics relating to solid waste facilities in San Mateo County.

TABLE X-4

DATA COLLECTION SYSTEM

FOR SOLID WASTE FACILITIES IN SAN MATEO COUNTY

Data to be submitted quarterly for each transfer-processing station or landfill pursuant to solid waste facilities permit.

Operating Data

Tonnages Received	
Scavenger Collections	_____
Public Dumping	_____
Tonnages Recycled by Type of Material	
_____	_____
_____	_____

Revenues

Disposal Fees	
Scavenger Collections	\$ \$ _____
Public Dumping	\$ \$ _____
Revenue Per Ton	
Scavenger Collections	\$ \$ _____
Public Dumping	\$ \$ _____
Recycled Materials	
_____	\$ \$ _____
_____	\$ \$ _____

Expenses

General Overhead	\$ \$ _____
Plant Operation and Maintenance	\$ \$ _____

Expenses (Continued)

Capital Improvements	
Capital Outlay	\$ \$ _____
Depreciation or Amortization Taken	\$ \$ _____
Expense Allocated to Functions	
Scavenger Collections	\$ \$ _____
Public Dumping	\$ \$ _____
Recycling	\$ \$ _____
Expense Per Ton	
Scavenger Collections	\$ \$ _____
Public Dumping	\$ \$ _____
Recycled Materials	
_____	\$ \$ _____
_____	\$ \$ _____
Net Operating Cost Per Ton of Refuse Received	\$ \$ _____

2. Additional Studies

As indicated in Chapter IX, further studies will be needed to provide new and updated information useful to longer range aspects of the solid waste management plan. The list of studies in the Implementation Schedule, Table X-5, indicates the order of priority as determined by the Solid Waste Advisory Committee as well as the appropriate agency and approximate time frame for performing each study.

TABLE X-5

IMPLEMENTATION SCHEDULE

<u>ACTIVITY</u>	<u>RESPONSIBILITY</u>	<u>TIME PERIOD</u>
Solid Waste Facilities Permits	Environmental Health Department	Begin in Fall of 1977
Data Collection System	Environmental Health and Public Works Department	Begin in 1977
Solid Waste Ordinances	Environmental Health Department Working With County and Each City	1977 - 1980
Additional Studies		
1. Identification of Group 1 Waste Quantities and Source Generation Locations.	Environmental Health and Public Works Department With Advice from State Health Department	June - October, 1977
2. Resolution of Short, Medium or Long-Term Uncertainties Pertaining to a Transfer-Processing Facility in the Vicinity of Redwood City and to Ox Mountain Facilities and to General Public Dumping Facilities.	Solid Waste Advisory Committee to Initiate and Provide Forum for Discussions. Staff Support by Public Works Department.	June - December, 1977
3. Continuing Evaluations Regarding "State of the Art" and Alternatives for Resource Recovery Systems Including Energy Recovery and the Bay-Delta Concept.	Public Works Department	Ongoing Annual Reports to County Board of Supervisors.

ACTIVITY	RESPONSIBILITY	TIME PERIOD
Additional Studies (Continued)		
4. Investigation of Resource Recovery Potential From Transferring and Processing of Refuse From North San Mateo County <u>and</u> Adjacent Areas.	Public Works Dept.	1978
5. Adequacy of the Environmental Health and Sanitation Aspects of the State-wide Minimum Storage and Collection Standards.	Environmental Health Department	1977
6. Investigations Regarding the Economic Feasibility of Methane Gas Recovery From the Corinda los Trancos landfill.	Browning-Ferris Industries of San Mateo County Pursuant to Sanitary Landfill Operating Agreement with County of San Mateo.	Biennial Reports Beginning January, 1978.
7. Investigations of Impacts of Public Rubbish Dumping Test at Ox Mountain Site.	Public Works Dept.	Data Collection Ongoing Analysis Phase in Fall of 1978.
8. Regional Marketing for Reclaimed Materials.	Public Works Dept, with Help from State and ABAG,	1979
9. Investigation of Economic and Environmental Implications of the Volume of General Public Dumping in San Mateo County.	Public Works and Environmental Health Departments	1979
10. Resolution of Roles and Responsibilities of Special Districts in Solid Waste Management.		

3. Contingency Plan

Solid waste collection and/or disposal could be disrupted by any of a number of occurrences, including natural or man-caused disasters, labor disputes, fuel shortage, or transfer-processing breakdown. Accidents involving spillage of hazardous wastes may present extraordinary danger for the public. A highly detailed contingency plan is not practical because the possible variations are endless. Nevertheless, general guidelines can be given for the purpose of expediting emergency actions necessary for the mitigation of dangerous conditions or the restoration of essential services. The San Mateo Area Civil Defense and Disaster Office is the key agency to coordinate activities when mobilization of governmental units is required.

(a) Hazardous Waste Spills

The San Mateo Operational Area proposes to utilize the State Oil Spill Contingency Plan. Under this Plan, response actions and responsibilities are set forth for dealing with spillages on State highways, as well as in bodies of water. The Department of Transportation (Caltrans) has a detailed operational plan spelled out in its "Hazardous Materials Spill Procedure Manual".

Away from State Highways, it is the policy of the State, in connection with pollution incidents, to

provide local governments with accurate and timely information regarding the spill and its effects. With such information, developed by Federal and State on-scene coordinators, local governments will be better able to plan their responses in a coordinated fashion.

(b) Disasters

If a widespread natural or man-caused disaster occurs, a county-wide or regional civil defense or disaster plan may be implemented. The elements of this plan would depend on the type and extent of the disaster. Under conditions wherein normal life is severely disrupted, solid waste collection and disposal activities may be simply suspended until a week or more after the disaster occurs. A high priority consideration should be the disposal of disaster-generated rubble and debris. The San Mateo Public Works Department proposes to offer assistance to the San Mateo Area Civil Defense and Disaster Office for the advance preparation of a list of potential emergency disposal sites that would become operational with the declaration of a disaster. Other emergency actions should be considered in the event of suspension of normal collection service, limited or partial service, unavailability of equipment or manpower, or inaccessibility of disposal sites. The following actions should be considered for the situations summarized:

<u>Situation</u>	<u>Considered Action</u>
Suspension of normal collection service	Distribute drop boxes and containers accessible to residential, commercial, and industrial sources. Direct citizens to take refuse to disposal sites.

<u>Situation</u>	<u>Considered Action</u>
Limited or partial service	Decrease the frequency of service to the affected area. Impose curbside service as opposed to backyard pickup. Suspend service to portions of affected area.
Unavailability of equipment and manpower	Use equipment from local governmental or private sources. Use local governmental personnel, volunteers, or civil defense manpower.
Inaccessibility of disposal site	Use alternate facility if available. Open closed sanitary landfills to temporary re-use.

(c) Labor Disputes

In the event of disruption of service by a labor dispute, it is the responsibility of the franchised collector to provide emergency personnel. If the operator cannot provide minimal essential collection services, then the jurisdiction granting the franchise should have the right to take over the operation. If the jurisdiction cannot maintain an acceptable level of service with governmental personnel, then appropriate emergency action, as described for disasters, should be instituted.

Keeping landfill disposal facilities open for general public disposal will permit somewhat less frequent collection service to be maintained. Facilities operated by a governmental agency can be run by supervisory personnel in the event of disruption of service. Where facilities are operated under contract, employees of the affected jurisdiction will

ENCLOSURES

TABLE IV-2

SOLID WASTE COLLECTION SYSTEMS IN SAN MATEO COUNTY (1976)

<u>FRANCHISED COLLECTOR</u>	<u>LOCAL ENTITY SERVICED</u>	<u>DATE OF FRANCHISE</u>	<u>EXPIRATION DATE</u>	<u>RESIDENTIAL RATE/ 30-GALLON CAN</u>	<u>LOCATION, RESIDENTIAL COLLECTION</u>	<u>DISPOSAL SITE</u>
Coastside Scavenger Co.	Pacifica	11/10/70	11/10/92	3.75	Curbside	Mussel Rock
	Granada Sanitary District	10/01/66	10/01/86	3.50	Curbside	(Daly City-Coastside)
	Montara Sanitary District	10/01/66	10/01/86	3.50	Curbside	
Daly City Scavenger Co.	Daly City	08/30/50	08/30/89	3.45	Curbside	Mussel Rock
	Colma			4.40	Backyard	(Daly City-Coastside)
South San Francisco Scavenger Co.	Brisbane	03/23/69	03/22/79	2.55	Curbside	Marsh Road
	South San Francisco	09/01/71	09/01/81	2.70	Backyard	(Menlo Park-Bayside)
	Millbrae	05/72	05/92	2.90	Backyard	
San Bruno Garbage Co.	San Bruno	1957	1987	2.75	Curbside	Marsh Road (Menlo Park-Bayside)
San Mateo County Scavenger Co.	Hillsborough	1957	08/31/77	4.08	Backyard	Marsh Road **
	Burlingame	09/01/57	08/31/77	2.70	Backyard	(Menlo Park-Bayside)
	San Mateo	1957	08/31/77	2.70	Backyard	
	Foster City	1967	08/31/77	2.70	Backyard	
	Belmont	08/01/57	06/30/77	2.70	Backyard	
	San Carlos	07/01/57	06/30/77	2.70	Backyard	
	Redwood City	07/01/57	06/30/77	2.69	Backyard	
	Atherton	01/01/58	12/01/77	4.08	Backyard	
	Menlo Park	1958	01/31/78	2.70	Backyard	
	Menlo Park Sanitary Dist.	07/01/57	06/30/77	2.70	Backyard	
	East Palo Alto (County Service Area No. 5)	11/01/74	06/30/77	2.70*	Curbside	
	San Mateo Co. (So. Coastal)	05/64	05/79	2.25	Less than 40' from front property line	
	Half Moon Bay	1962	03/21/77	2.70	Backyard	
Los Altos Garbage Co.	Portola Valley	05/67	05/77	3.70	Less than 100' from street	Alviso
	Woodside	05/67	05/77	3.70	Less than 100' from street	(9 Par Co.)
	Ladera (Uninc.)			2.25	Less than 100' from street	

* Two cans allowed under basic rate.

** Marsh Road includes two disposal facilities owned by the City of Menlo Park. A portion of refuse collected by the San Mateo County Scavenger Co. is disposed of through the South County Garbage and Refuse Disposal District operation.

Garbage collection service is available throughout the county except in the most sparsely populated portion of the south coastside. Subscription to this service is mandatory in virtually all the cities in the county except Colma. It is also mandatory in the unincorporated area where service is available. Foster City's ordinance requires that garbage be removed every ten days, but does not specify how. Half Moon Bay allows self-service under a permit which has a fee of \$1,000 per year. The frequency of service under all franchises is once a week. Unincorporated areas are served under franchises issued either by sanitary districts or the county, or else are served and charged on the same basis as adjacent cities. An exception is Ladera, adjacent to Portola Valley, which is charged Santa Clara County rates. East Palo Alto is served in accordance with a franchise by County Service Area #5, whose governing board is the county Board of Supervisors. The system covering this area is unique for the county and a possible model for other areas in that billing is done through county tax bills thus mandating use of the service in an economically disadvantaged area. The standard collection rate is for two 32-gallon containers per week and 200 pounds of garden cuttings per month. One other unincorporated area is served in accordance with a franchise from the county, the south coastside area encompassing La Honda, Pescadero, and San Gregorio.

TABLE IV -
DISPOSAL CHARGES FOR GENERAL PUBLIC DUMPING (1976)
DISPOSAL FEES (\$/c.y.)

<u>DISPOSAL SITE</u>	<u>RESIDENT</u>		<u>NON-RESIDENT</u>	
	<u>HOUSEHOLD</u>	<u>COMMERCIAL</u>	<u>HOUSEHOLD</u>	<u>COMMERCIAL</u>
Colma - Junipero	2.00	2.00	2.00	2.00
Colma - Hillside	2.00	2.00	2.00	2.00
Burlingame	.75	1.00	1.50	2.00
San Mateo	.75	1.00	1.50	2.00
Marsh Road-Dist.	1.25	1.25	3.00	2.00
Half Moon Bay	.75	.75	.75	.75
Pescadero	.75	.75	.75	.75

TABLE IV-4
SOLID WASTE RECYCLING PROJECTS
OPEN TO GENERAL PUBLIC
IN SAN MATEO COUNTY (1976)

CITY	OPERATION	NAME AND ADDRESS	PHONE CONTACT	TYPE OF MATERIAL	DAYS AND TIME
Burlingame	City	City Disposal Facility 1001 Airport Blvd. Burlingame	342-1511 364-3239	Aluminum Cans Newspapers	Daily 8:00 A.M. - 5:00 P.M.
Foster City	Citizen	Foster City Recycling Center End Third Avenue Foster City	573-5708	Glass, Cans	Sundays Only 12:00 Noon - 4:00 P.M.
Pacifica	Scavenger	Coastside Scavenger Co. 2305 Palmetto Ave. Pacifica	355-3262	Newspapers	Mondays through Fridays 8:00 A.M. - 4:00 P.M. Saturdays 8:00 A.M. - 10:00 A.M.
	Citizen	Ecology Action San Pedro Terrace Rd. & Highway 1 Pacifica	359-5353	Glass, Cans Newspapers, Corrugated Cardboard	Tuesdays and Saturdays 10:00 A.M. - 12:00 Noon
Redwood City	Citizen	Canada College Recycling Center 4100 Farm Hill Blvd. Redwood City	364-1212 Ext. 276	Glass, Ferrous Cans, Aluminum Cans, Cardboard Boxes	Weekdays 1:00 P.M. - 4:00 P.M. Saturdays 11:00 A.M. - 3:00 P.M.
	Industrial	Coors West Inc. 890 Broadway Redwood City	368-2525 368-2825	Aluminum	Tuesdays and Thursdays 9:00 A.M. - 12:00 Noon
	Industrial	Reynolds Aluminum Recycling Center 3051 Edison Way Redwood City	364-5410	Aluminum	Tuesdays through Saturdays 9:00 A.M. - 4:30 P.M.
San Bruno	Scavenger	San Bruno Garbage Co. 101 Tanforan Avenue San Bruno	583-8536	All Metals Newspapers	Mondays through Fridays 8:00 A.M. - 1:00 P.M.
San Carlos	Citizen	Carlmont YMCA 2811 San Carlos Ave. San Carlos	591-9622 (Mick Colton)	Glass, Cans	Last Saturdays Only 8:00 A.M. - 1:00 P.M.
San Mateo	City	San Mateo Disposal Facility East Third Avenue San Mateo	592-2411	Aluminum Cans, Newspapers	Daily 8:00 A.M. - 5:00 P.M.
South San Francisco	Scavenger	S. S. F. Scavenger Co. 180 Oyster Point Blvd. South San Francisco	589-4020	Ferrous Metals, Newspapers	Daily 8:00 A.M. - 4:00 P.M.
	Industrial	Kaiser Aluminum Co. 177 S. Airport Blvd. South San Francisco	589-9676 271-3469	Aluminum	Mondays 12:00 Noon - 3:00 P.M. Fridays 3:00 P.M. - 7:00 P.M.
Woodside	Citizen	Kings Mountain Community Center 13889 Skyline Blvd. Woodside	851-0558 (Bill Barrows)	Glass, Cans Newspapers, Corrugated Cardboard	Daily

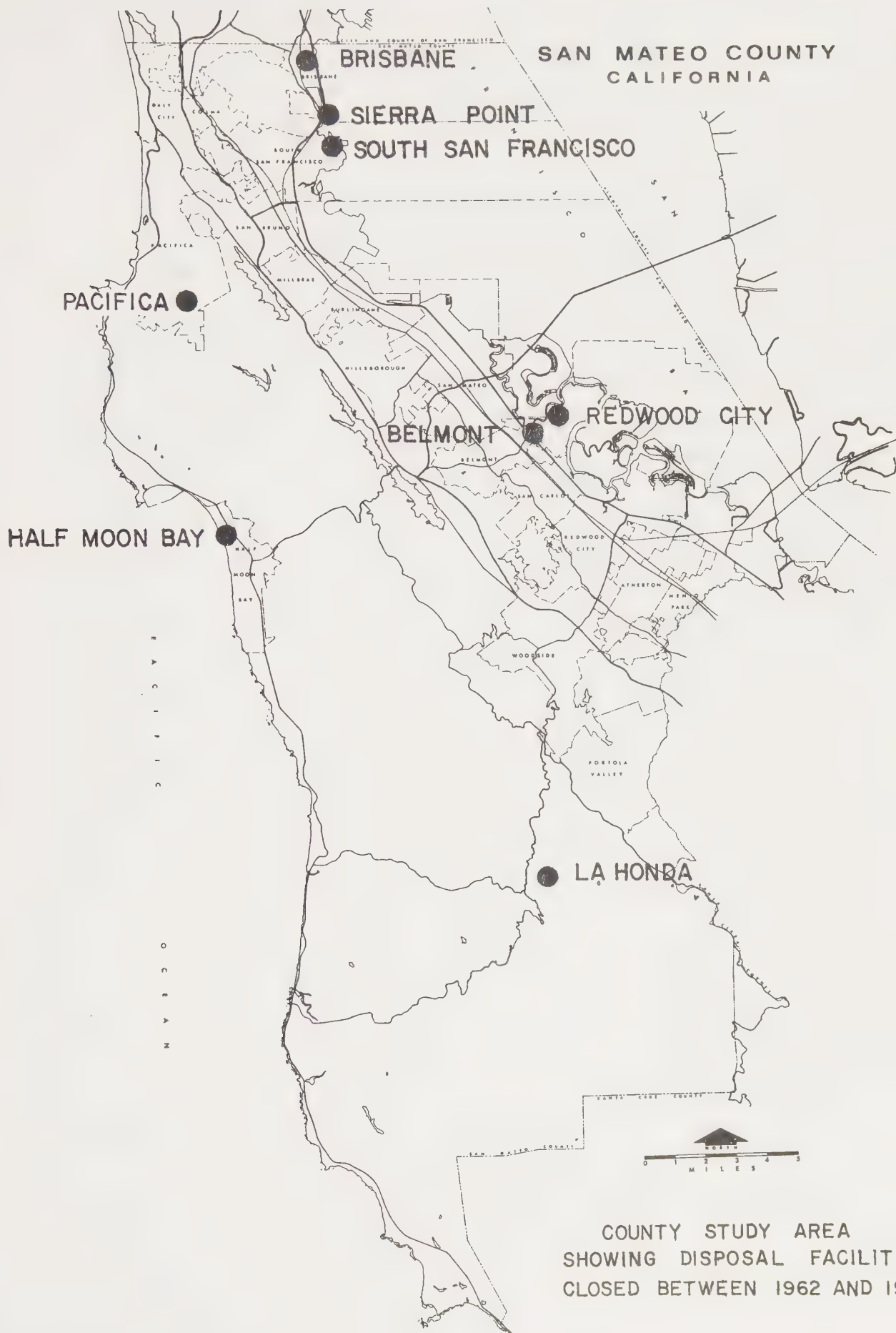
TABLE IV -
SALVAGING/RESOURCE RECOVERY
SAN MATEO COUNTY (1976)
(TONS PER YEAR)

	<u>Aluminum</u>	<u>Ferrous Metal</u>	<u>Glass</u>	<u>Newsprint</u>	<u>Corrugated Paper</u>	<u>Other Waste Paper</u>	<u>TOTAL</u>
Refuse Collectors & Affiliated Companies		530	120	950	13,000	150	14,750
Commercial Distributors & Collection Centers	320						320
Ecology & Civic Groups	<u>8</u>	<u>36</u>	<u> </u>	<u>239</u>	<u> </u>	<u> </u>	<u>283</u>
	328	566	120	1,189	13,000	150	15,353

INSERT P. IV-37

Hand sorting is practiced by Daly City Scavenger Company, Coastside Scavenger Company, South San Francisco Scavenger Company, San Bruno Garbage Company and San Mateo Disposal Company. At present, their salvaging operations reduce the overall waste stream by approximately two percent. Corrugated cardboard and newspapers account for most of the tonnage of salvaged materials. About 4.2% of the waste paper is being recycled.

Although aluminum constitutes a much smaller fraction of the waste stream than does paper, the industry-sponsored collection centers are making a significant reduction in the aluminum waste streams as 4.7% of the waste aluminum is being returned to these centers. Ferrous metals rank behind aluminum with respect to the percentage of the waste product salvaged. Glass comes next.



INSERT FOR P. V-5

As Table V-3 indicates, 560 cubic yards of sludge per month are being deposited in San Mateo County landfills and 170 yards are being taken out of the County. At the City of San Mateo sewage treatment plant, the sludge is incinerated, leaving only 30 cubic yards of ash to be deposited at the nearby landfill. The sludge generated in the mid-coastside area is used as a soil conditioner by local residents. At the South San Francisco - San Bruno sewage treatment plant, the sludge is piped to an adjacent composting site where it is combined with rice hulls and coffee grounds to produce a commercial soil conditioner. Of the landfills, Marsh Road receives a major portion of the sludge generated in San Mateo County, 355 cubic yards per month. Mussel Rock takes 105 cubic yards and Burlingame 100 yards. The Mountain View landfill in Santa Clara County takes the 170 yards per month of undigested sludge from the Estero Municipal Improvement District plant in Foster City. The City of San Mateo has agreed to incinerate the Foster City sludge in the future.

Disposal to landfills is only one of the several practical methods of sludge disposal. Economics, rather than physical limitations of landfill sites, may determine whether landfill disposal remains the most popular practice.

There appears to be no problem with regard to the long-term capability of San Mateo County's sanitary landfills to accommodate

sewage sludges. The water balance at Ox Mountain should be such as to accommodate the addition of considerable moisture. A landfill receiving typical Group 2 and Group 3 refuse in this climate tends to absorb more moisture than it releases. Maintaining moisture requirements for sludge, as set by the Regional Water Quality Control Board, will minimize the leachate potential. Furthermore, leachate control features will be built in at the base of the landfill.

As for the Mussel Rock landfill, a geotechnic report on the site is currently in preparation. If this report should indicate a possible problem regarding the site's capability to accommodate sewage sludge, then the sludge could be transported to Ox Mountain instead.

TABLE V-3

SEWAGE SLUDGE DISPOSALSAN MATEO COUNTY (1976)DISPOSAL TO LANDFILLS
(CUBIC YARDS PER MONTH)

SEWERAGE AGENCY	DISPOSAL METHOD	BURLINGAME	SAN MATEO	MARSH RD.	MUSSEL ROCK	OUT OF COUNTY
Guadalupe Valley MID	Open Drying Beds					
South San Francisco-	Compost (Tillo Products)					
San Bruno						
San Francisco Airport	Airport Landspreading					
Millbrae	Landfill			35		
Burlingame	Landfill	100				
San Mateo	Incineration Ash to Land- fill		30			
Foster City	Landfill					170
San Carlos-Belmont	Landfill			40		
Redwood City	Landfill			200		
Menlo Park Sanitary District	Landfill			80		
North San Mateo Co. Sanitary District	Landfill				60	
Pacifica	Landfill				45	
Montara Sanitary District	Local Residents					
Granada Sanitary District	Local Residents					
Half Moon Bay	Local Residents					
<u>TOTALS:</u>		<u>100</u>	<u>30</u>	<u>355</u>	<u>105</u>	<u>170</u>

Expand Section J, Storage and Collection Standards by substituting the following for the second and third paragraphs:

Surveys conducted by the County Health Department have indicated significant use of improper or defective refuse containers, refuse not being placed in available containers, instances where the volume of the refuse produced on the premises exceeds the capacity of the container, excessive amounts of yard and household rubbish accumulating for long periods of time in back yards, garages and storage sheds and also that a large number of householders do not subscribe to regular refuse collection service even though the cities and the county require the service to be mandatory.

Recommendations pertaining to these problems will be prepared in ordinance form for adoption by the various cities and the county. These recommendations will include; type and quantity of refuse containers to be required, basic minimum garbage and rubbish service to single family residences, multiple dwellings and commercial establishments, minimum collection frequency and a method of financing refuse collection to insure all franchise areas receive regular refuse removal.

Provisions are in the process of being written into the county's land use approval procedures which will require developers within the unincorporated areas of the county to include solid waste storage and removal plans in their projects when applying for permits.

ERRATA

- P. IV-37 Bottom three lines beginning with "A county ordinance" should be crossed out.
- P. V-3 At bottom of page, "75%" should read "50%".
- P. IX-6 Text beginning with words "Specific areas" should be crossed out. The list of studies is now placed in Chapter X.

STATE SOLID WASTE MANAGEMENT BOARD
RESOLUTION 76-45

RESOLUTION OF PARTIAL APPROVAL
SAN MATEO COUNTY SOLID WASTE MANAGEMENT PLAN

WHEREAS, the Nejedly-Z'berg-Dills Solid Waste Management and Resource Recovery Act of 1972 (hereafter referred to as the Act) requires each county in cooperation with affected local jurisdictions, to prepare a comprehensive, coordinated solid waste management plan; and

WHEREAS, said Act also requires that such plan shall be consistent with State Policy and any appropriate regional or sub-regional solid waste management plan; and

WHEREAS, said Act also requires that the county solid waste management plan shall be subject to the approval by a majority of the cities within the County which contain a majority of the population of the incorporated area of the County; and

WHEREAS, the County of San Mateo has prepared a plan for solid waste management in conformance with the Act and on March 3, 1976, submitted said plan to the State Solid Waste Management Board for approval; and

WHEREAS, resolutions of approval have been received from a majority of the cities within the County which contain a majority of the population of the incorporated area of the County; and

WHEREAS, the County of San Mateo has adopted the plan by resolution; and

WHEREAS, the State Solid Waste Management Board Plan Review Committee and the Board's staff has reviewed said plan and found it to be in conformance with the Board's Policy and Planning Guidelines for the Preparation of Solid Waste Management Plans with the exception of the implementation schedule; and

WHEREAS, the Mussel Rock Disposal Site will have a much shorter life than the County Solid Waste Management Plan originally anticipated and a regional transfer station will be needed for the Pacifica-Daly City area much sooner than the year 2000; and

NOW, THEREFORE, BE IT RESOLVED that the State Solid Waste Management Board has reviewed said plan and hereby approves the plan as submitted with the exception of the implementation schedule and the date of initiation for the northwest regional transfer station.

BE IT FURTHER RESOLVED that the County of San Mateo shall file, within 120 days of this date, an approved amendment to the County Solid Waste Management Plan, as provided by Section 17155 of the Board's regulations.

CERTIFICATION

The undersigned Executive Officer of the State Solid Waste Management Board does hereby certify that the foregoing is a full, true and correct copy of a Resolution duly and regularly adopted at a meeting of the State Solid Waste Management Board held on November 5, 1976.

Dated: November 5, 1976



Albert A. Marino
Executive Officer

(SAMPLE)

RESOLUTION CONCURRING IN
THE SOLID WASTE MANAGEMENT PLAN
FOR SAN MATEO COUNTY AS REVISED

WHEREAS, the Nejedly-Z'berg Dills Solid Waste Management and Resource Recovery Act of 1972 (hereafter referred to as the Act) requires each County in cooperation with affected local jurisdictions, to prepare a comprehensive, coordinated Solid Waste Management Plan consistent with State policy; and

WHEREAS, said Act also requires that the County Solid Waste Management Plan shall be subject to the approval by a majority of the cities within the County which contain a majority of the population of the incorporated area of the County; and

WHEREAS, a Solid Waste Management Plan for San Mateo County in conformance with the Act was completed and on March 3, 1976 was submitted to the State Solid Waste Management Board for approval; and

WHEREAS, the State Solid Waste Management Board on November 5, 1976 adopted Resolution No. 76-45 partially approving said plan and directing that an approved amendment be submitted; and

WHEREAS, on _____ the plan as revised has been submitted to this Council for approval;

NOW THEREFORE BE IT RESOLVED that the City Council of the City of _____ has reviewed said plan as revised and hereby specifically stipulates concurrence in the following: (a) the objectives set forth in the plan, (b) the method and organization for implementation of the programs contained in the plan, (c) the procedures for financing the recommended solid waste management program, and (d) the role identified in the plan for the City in implementing this cooperative effort for management of solid waste in an economical and environmentally acceptable manner.

U.C. BERKELEY LIBRARIES



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